

JOHN DEERE
WORLDWIDE COMMERCIAL & CONSUMER
EQUIPMENT DIVISION

Gator Utility Vehicle
TS and TH 6x4

TM2239 OCTOBER 2004

TECHNICAL MANUAL



JOHN DEERE

North American Version
Litho in U.S.A.

INTRODUCTION

Manual Description

This technical manual is written for an experienced technician and contains sections that are specifically for this product. It is a part of a total product support program.

The manual is organized so that all the information on a particular system is kept together. The order of grouping is as follows:

- Table of Contents
- Specifications and Information
- Identification Numbers
- Tools and Materials
- Component Location
- Schematics and Harnesses
- Theory of Operation
- Operation and Diagnostics
- Diagnostics
- Tests and Adjustments
- Repair
- Other

NOTE: Depending on the particular section or system being covered, not all of the above groups may be used.

The bleed tabs for the pages of each section will align with the sections listed on this page. Page numbering is consecutive from the beginning of the Safety section through the last section.

We appreciate your input on this manual. If you find any errors or want to comment on the layout of the manual please contact us.

Safety

Specifications and Information

Engine - Gas (10 Hp)

Engine - Gas (19 Hp)

Electrical

Power Train

Steering

Brakes

Miscellaneous

All information, illustrations and specifications in this manual are based on the latest information at the time of publication. The right is reserved to make changes at any time without notice.

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SAFETY

Recognize Safety Information



MIF

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

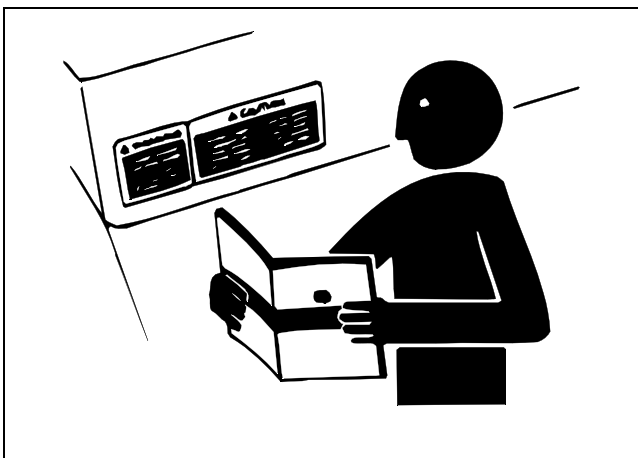
Follow recommended precautions and safe servicing practices.

Understand Signal Words

A signal word - DANGER, WARNING, or CAUTION - is used with the safety-alert symbol. DANGER identifies the most serious hazards.

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

Replace Safety Signs

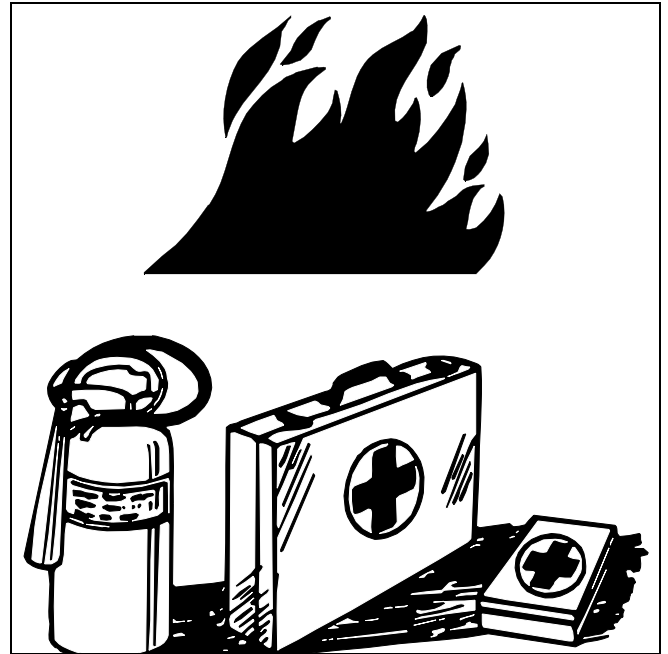


MIF

Replace missing or damaged safety signs. See the machine operator's manual for correct safety sign placement.

Handle Fluids Safely - Avoid Fires

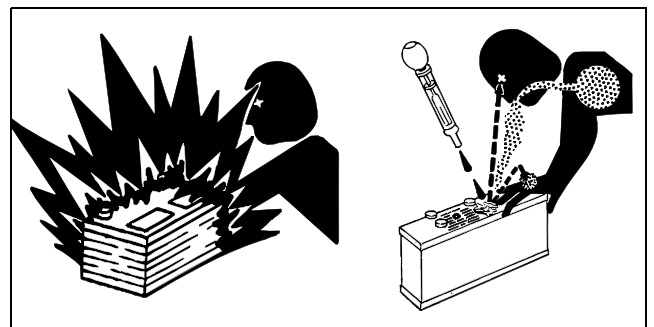
Be Prepared For Emergencies



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- When you work around fuel, do not smoke or work near heaters or other fire hazards.
- Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.
- Make sure machine is clean of trash, grease, and debris.
- Do not store oily rags; they can ignite and burn spontaneously.
- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.

Use Care In Handling and Servicing Batteries



MIF

SAFETY

Prevent Battery Explosions

- Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.
- Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.
- Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).

Prevent Acid Burns

- Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid acid burns by:

1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

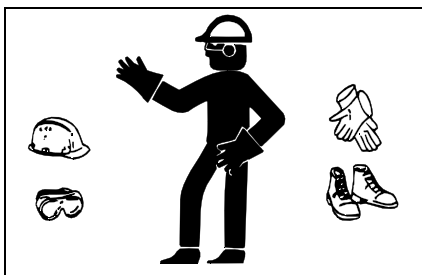
If you spill acid on yourself:

1. Flush your skin with water.
2. Apply baking soda or lime to help neutralize the acid.
3. Flush your eyes with water for 10 - 15 minutes.
4. Get medical attention immediately.

If acid is swallowed:

1. Drink large amounts of water or milk.
2. Then drink milk of magnesia, beaten eggs, or vegetable oil.
3. Get medical attention immediately.

Wear Protective Clothing



MIF

Wear close fitting clothing and safety equipment appropriate to the job.

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear a suitable hearing protective device

such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

Use Care Around High-pressure Fluid Lines

Avoid High-Pressure Fluids



MIF

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid injury from escaping fluid under pressure by stopping the engine and relieving pressure in the system before disconnecting or connecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available from Deere & Company Medical Department in Moline, Illinois, U.S.A.

Avoid Heating Near Pressurized Fluid Lines

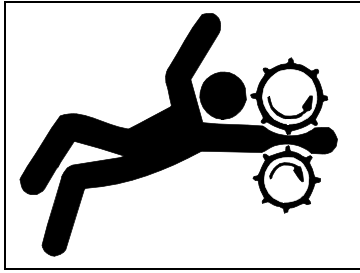


MIF

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame area.

SAFETY

Service Machines Safely



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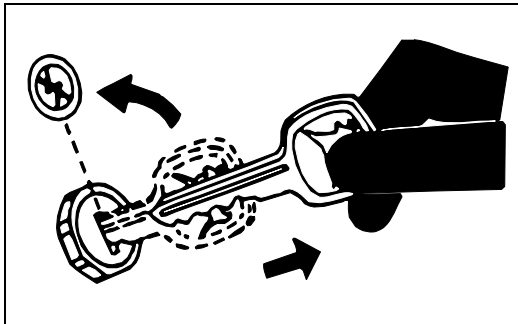
Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.

Use Proper Tools

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards. Use power tools only to loosen threaded parts and fasteners. For loosening and tightening hardware, use the correct size tools. **DO NOT** use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches. Use only service parts meeting John Deere specifications.

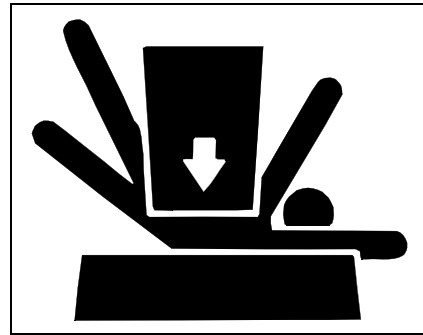
Parking Safely



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1. Stop machine on a level surface, not on a slope.
2. Disengage and stop attachments.
3. Lower attachments to the ground.
4. Lock park brake.
5. Stop engine.
6. Remove key.
7. Wait for engine and all moving parts to stop before you leave the operator's station.
8. Close fuel shut-off valve, if your machine is equipped.

Support Machine Properly and Use Proper Lifting Equipment



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If you must work on a lifted machine or attachment, securely support the machine or attachment.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.

Lifting heavy components incorrectly can cause severe injury or machine damage. Follow recommended procedure for removal and installation of components in the manual.

Work In Clean Area

Before starting a job:

1. Clean work area and machine.
2. Make sure you have all necessary tools to do your job.
3. Have the right parts on hand.
4. Read all instructions thoroughly; do not attempt shortcuts.

Using High Pressure Washers

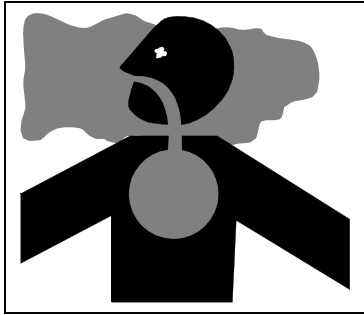
Directing pressurized water at electronic/electrical components or connectors, bearings, hydraulic seals, fuel injection pumps or other sensitive parts and components may cause product malfunctions. Reduce pressure and spray at a 45 to 90 degree angle.

Illuminate Work Area Safely

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.

SAFETY

Work In Ventilated Area



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Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.

Warning: California Proposition 65 Warning

Gasoline engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

Remove Paint Before Welding or Heating

Avoid potentially toxic fumes and dust. Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch. Do all work outside or in a well ventilated area. Dispose of paint and solvent properly. Remove paint before welding or heating: If you sand or grind paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Avoid Harmful Asbestos Dust

Avoid breathing dust that may be generated when handling components containing asbestos fibers. Inhaled asbestos fibers may cause lung cancer.

Components in products that may contain asbestos fibers are brake pads, brake band and lining assemblies, clutch plates, and some gaskets. The asbestos used in these components is usually found in a resin or sealed in some way. Normal handling is not hazardous as long as airborne dust containing asbestos is not generated.

Avoid creating dust. Never use compressed air for cleaning. Avoid brushing or grinding material containing asbestos. When servicing, wear an approved respirator. A special vacuum cleaner is recommended to clean asbestos. If not available, apply a mist of oil or water on the material containing asbestos. Keep bystanders away from the area.

Service Tires Safely



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Explosive separation of a tire and rim parts can cause serious injury or death.

Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job.

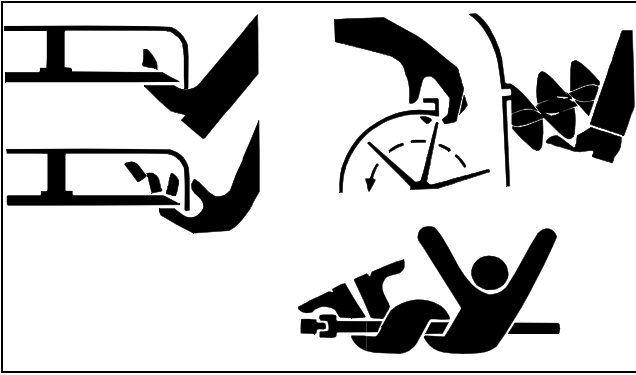
Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.

When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.

Check wheels for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

SAFETY

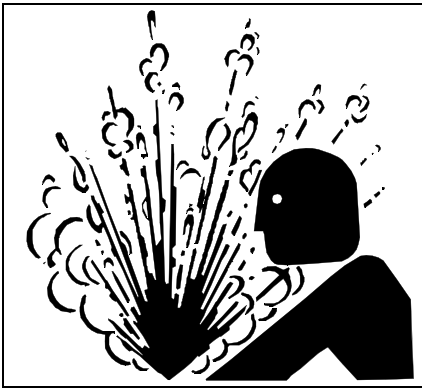
Avoid Injury From Rotating Blades, Augers and PTO Shafts



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Keep hands and feet away while machine is running. Shut off power to service, lubricate or remove mower blades, augers or PTO shafts.

Service Cooling System Safely

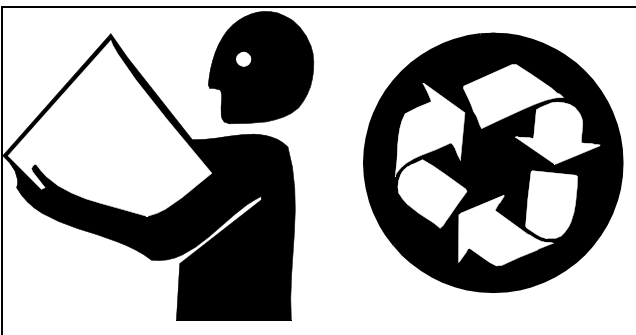


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Explosive release of fluids from pressurized cooling system can cause serious burns.

Shut off machine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

Handle Chemical Products Safely



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Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques. Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

Dispose of Waste Properly

Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries. Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them. Do not pour waste onto the ground, down a drain, or into any water source. Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.

Live With Safety



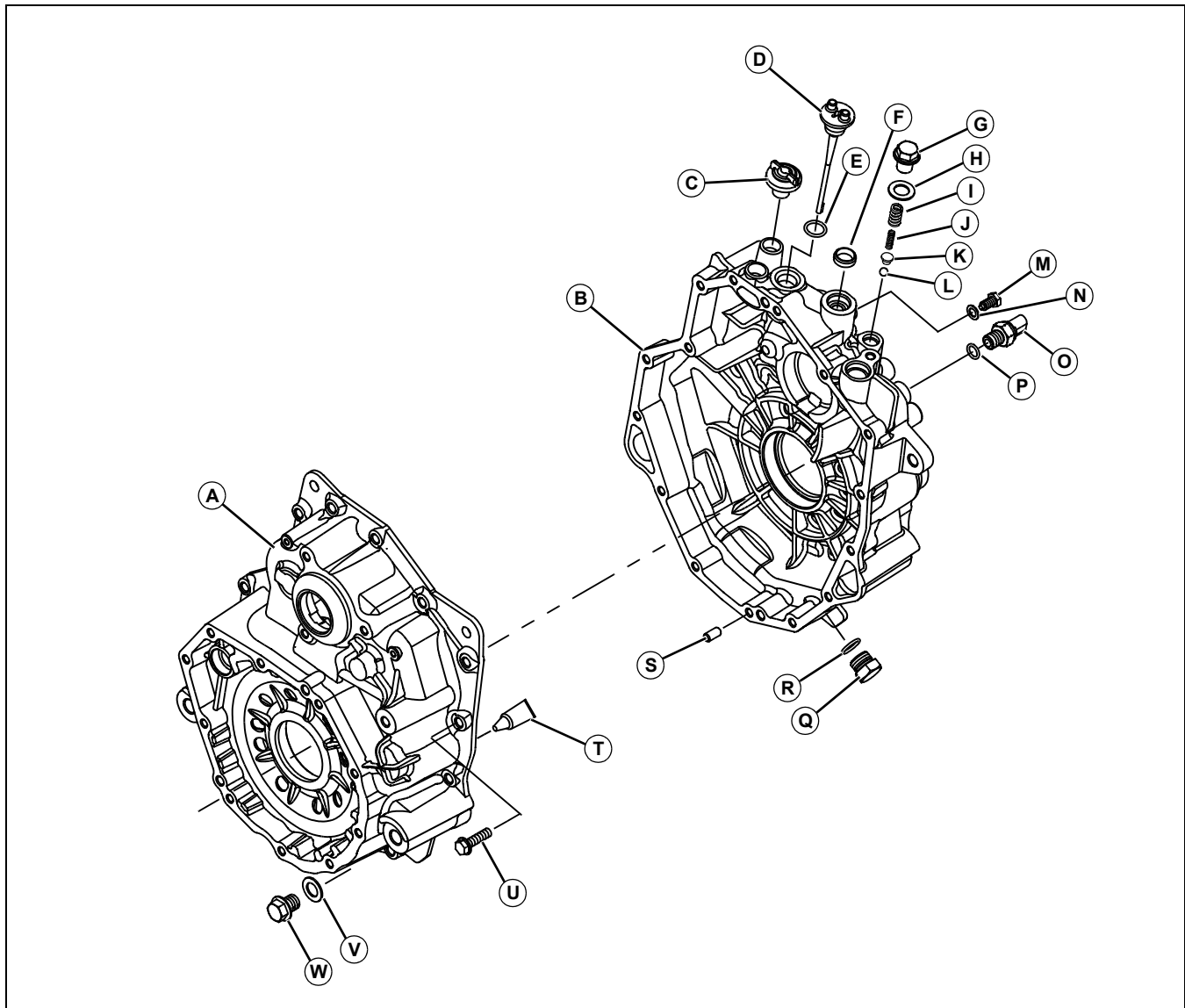
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Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.

POWER TRAIN COMPONENT LOCATION

Component Location

Transaxle Case Components



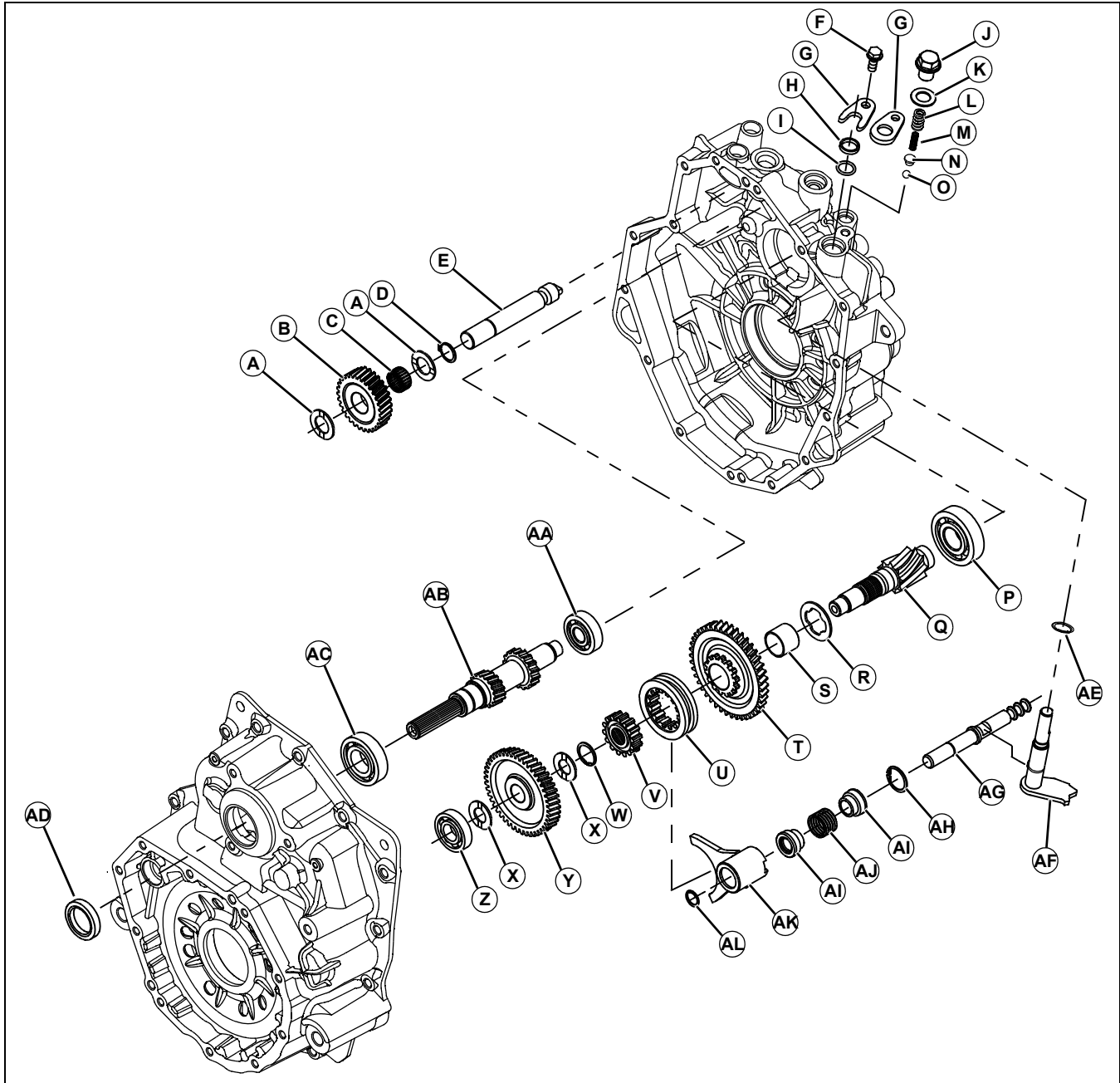
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- A - Case
- B - Case
- C - Vent Valve
- D - Oil Dipstick
- E - O-Ring
- F - Plug
- G - Flange Cap Screw
- H - Washer
- I - Spring, Outer
- J - Spring, Inner
- K - Button
- L - Detent Ball

- M - Screw
- N - Packing
- O - Neutral Switch
- P - O-Ring
- Q - Speed Sensor Access Plug
- R - Washer
- S - Alignment Pin (2 Used)
- T - John Deere Sealant (This side only)
- U - Bolt (15 used)
- V - Washer
- W - Drain Plug

POWER TRAIN COMPONENT LOCATION

Transaxle Gear Components



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A - Thrust Washer (2 used)

B - Idler Gear

C - Needle Bearing

D - Snap Ring

E - Idler Shaft

F - Cap Screw

G - Keeper Plate (Early models use fork design, Later models use full circle design with a retaining ring on top.)

H - Spacer

I - O ring

J - Flange Bolt

K - Washer

L - Spring, Outer

M - Spring, Inner

N - Button

O - Ball

P - Bearing

Q - Reduction Shaft

R - Washer

S - Sleeve

T - Gear

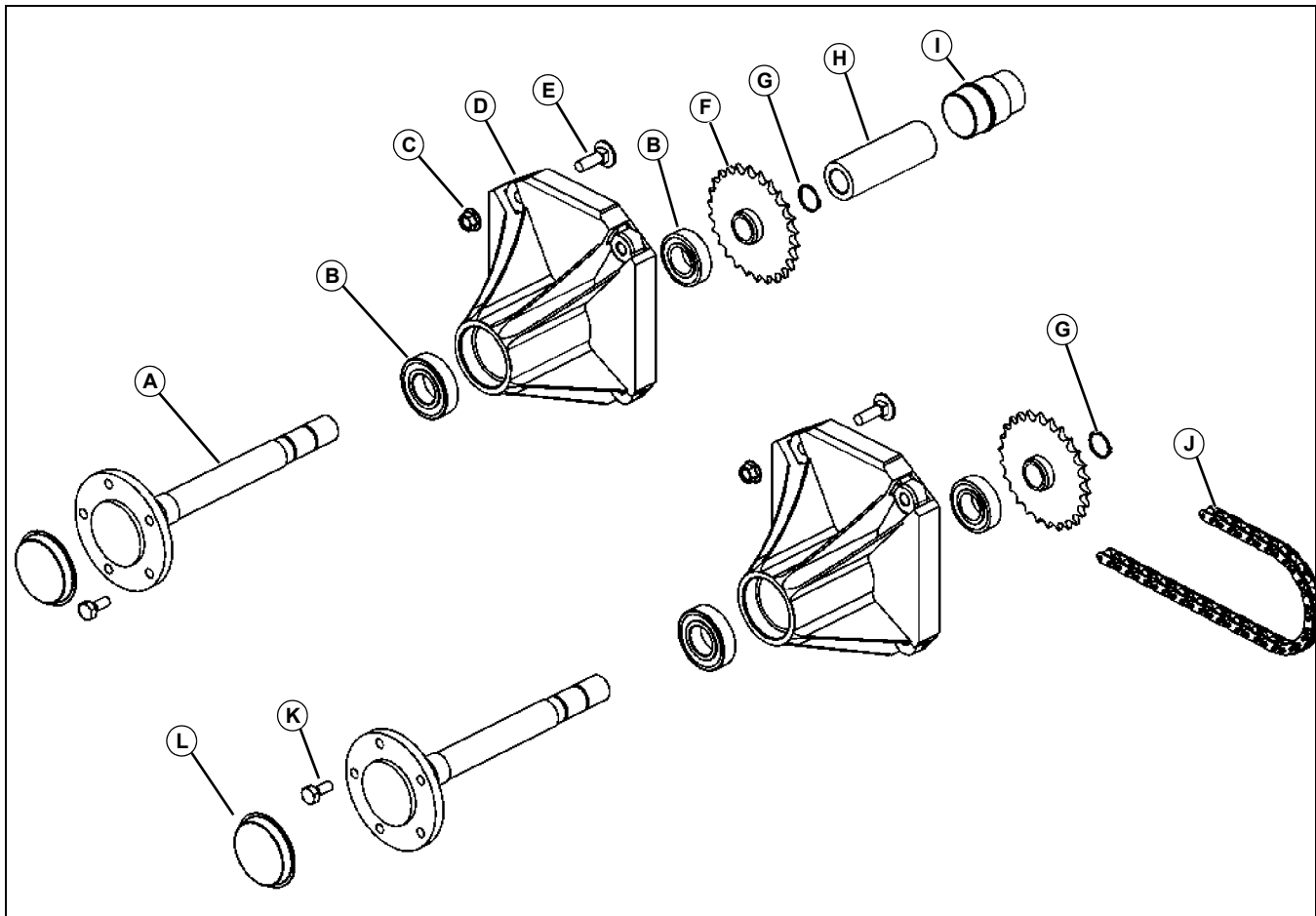
U - Shift Collar

POWER TRAIN COMPONENT LOCATION

- V - Splined Collar
- W - Snap Ring
- X - Thrust Washer (2)
- Y - Gear
- Z - Bearing
- AA- Bearing
- AB- Input Shaft
- AC- Bearing
- AD- Oil Seal

- AE- Snap Ring (Later models used with full circle keeper plate.)
- AF- Shift Arm
- AG- Fork Shaft
- AH- Snap Ring
- AI - Spring Collar (2 used)
- AJ- Spring
- AK- Shift Fork
- AL- Snap Ring

TH 6X4 - Axle Housing Components



MX33604

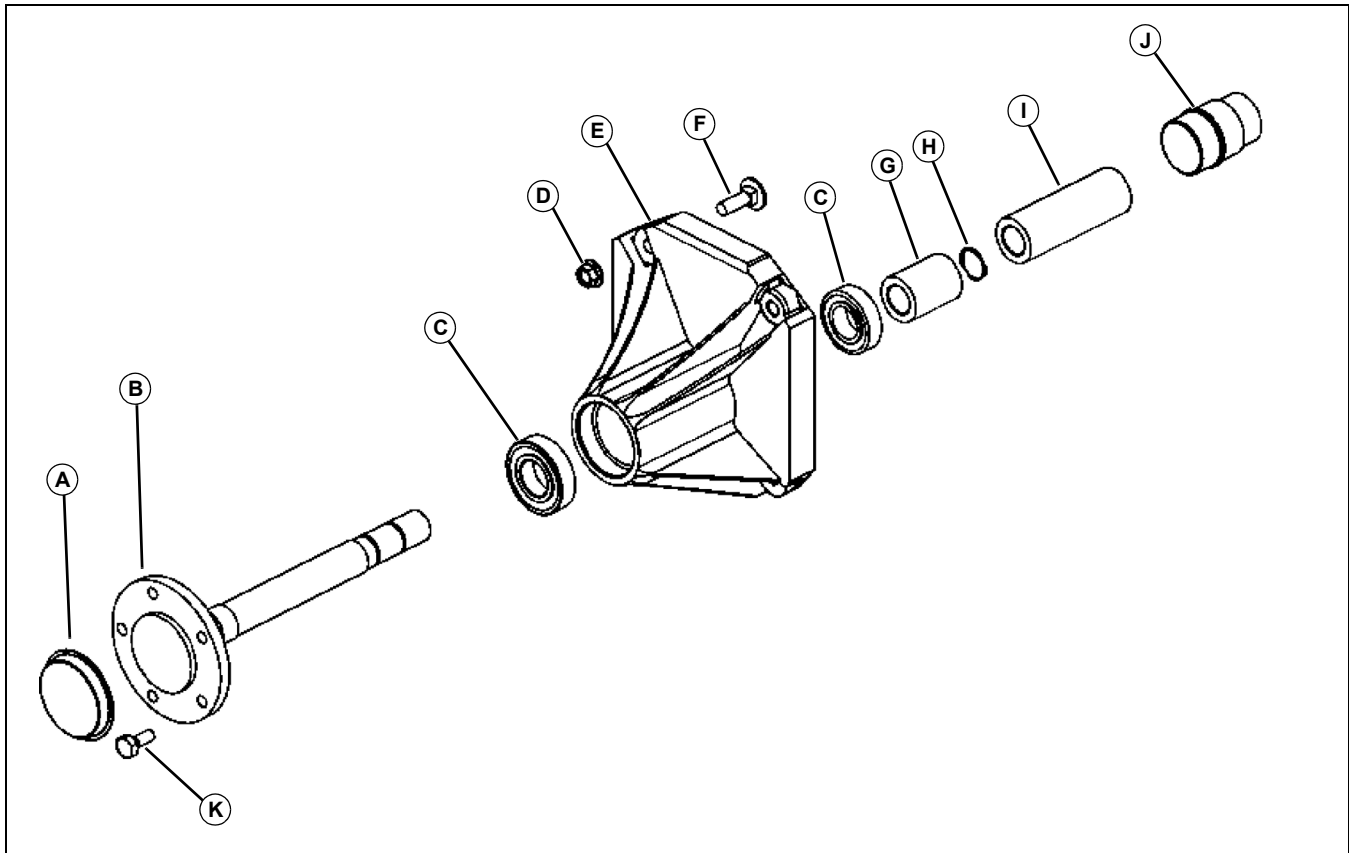
Picture Note: Left side axles shown. Right side parts are identical except for item (I) belt protector is not used.

- A - Axle
- B - Bearing
- C - Nut
- D - Housing
- E - Carriage Bolt
- F - Sprocket
- G - Snap Ring

- H - Splined Collar
- I - Belt Protector (LF Axle Only)
- J - Drive Chain
- K - Wheel Bolt
- L - Cap

POWER TRAIN COMPONENT LOCATION

TS - Axle Housing Components



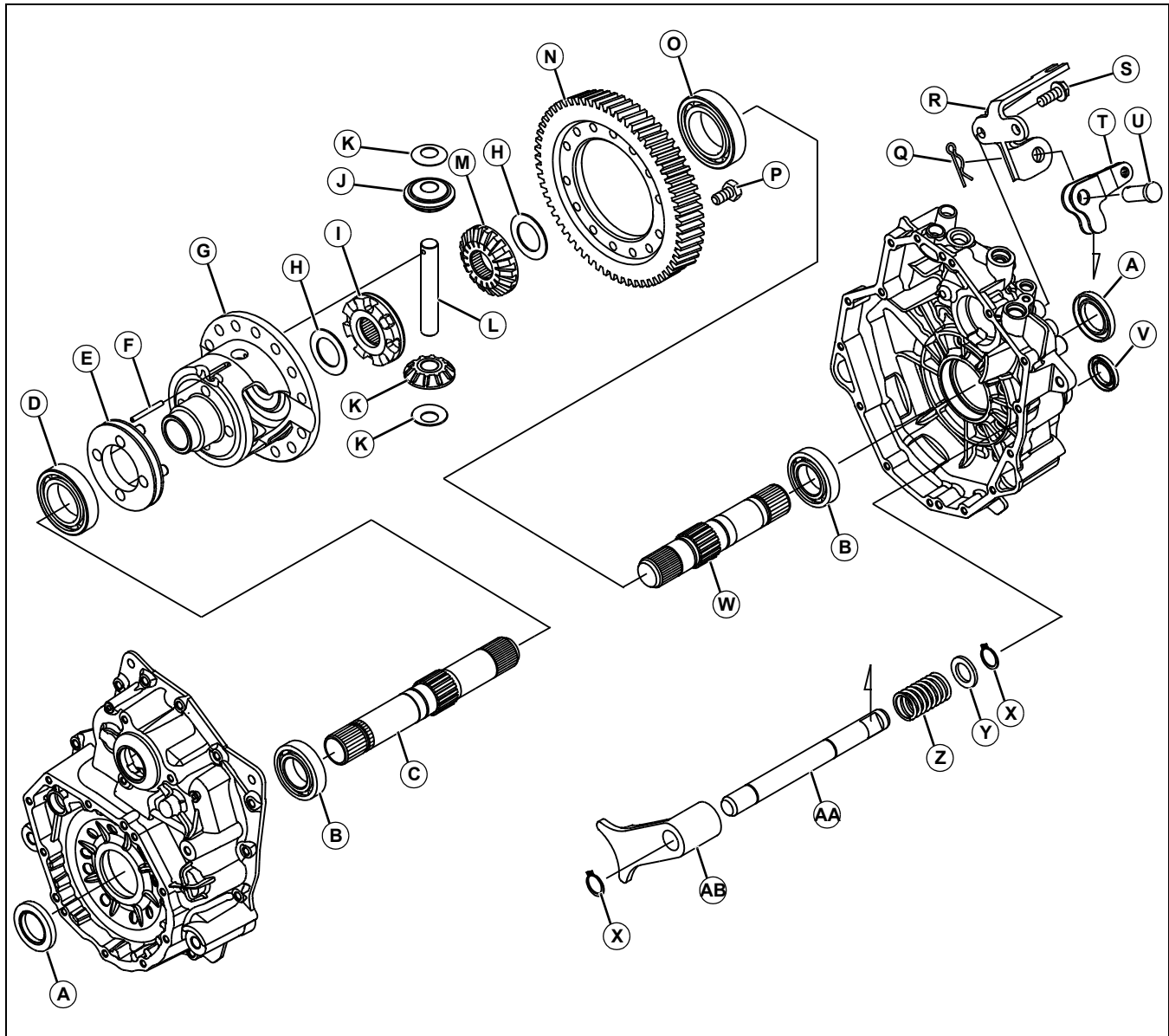
MX33605

Picture Note: Left side axle shown. Right side parts are identical except for item (J) belt protector is not used.

- A - Cap**
- B - Axle**
- C - Bearing**
- D - Nut**
- E - Housing**
- F - Carriage Bolt**
- G - Spacer**
- H - Snap Ring**
- I - Splined Collar**
- J - Belt Protector (Left Axle Only)**
- K - Wheel Bolt**

POWER TRAIN COMPONENT LOCATION

Differential Components



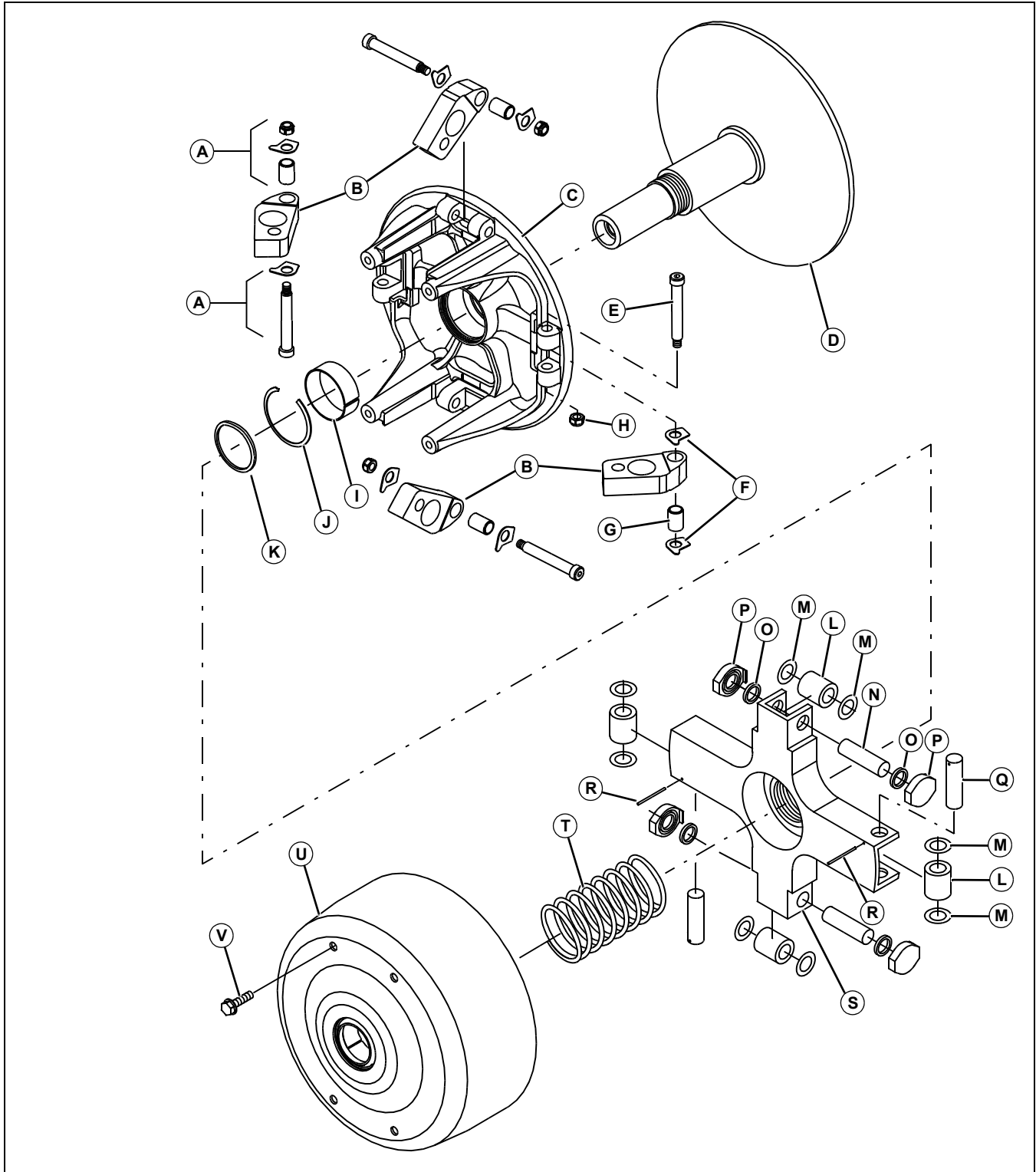
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- A - Seal (2 used)
- B - Bearing
- C - Left Drive Shaft
- D - Bearing
- E - Differential Lock Slider
- F - Spring Pin
- G - Differential Carrier
- H - Thrust Washer (2 used)
- I - Side Gear (Differential Lock)
- J - Pinion Gear (2 used)
- K - Washer (2 used)
- L - Pinion Shaft
- M - Side Gear

- N - Ring Gear
- O - Bearing
- P - Bolt (14 used)
- Q - Spring Pin
- R - Differential Lock Cable Bracket
- S - Bolt (2 used)
- T - Differential Lock Lever
- U - Drilled Pin
- V - Seal
- W - Right Drive Shaft
- X - Snap Ring (2 used)
- Y - Washer
- Z - Spring
- AA - Differential Lock Shaft
- AB - Differential Lock Shift Fork

POWER TRAIN COMPONENT LOCATION

Drive Clutch



mif

- A - Pivot Bolt Kit**
- B - Flyweight (4 in kit)**
- C - Clutch Plate, Moveable**
- D - Clutch Plate, Stationary**

- E - Pivot Bolt²**
- F - Bushing (2 used per weight)²**
- G - Bushing²**

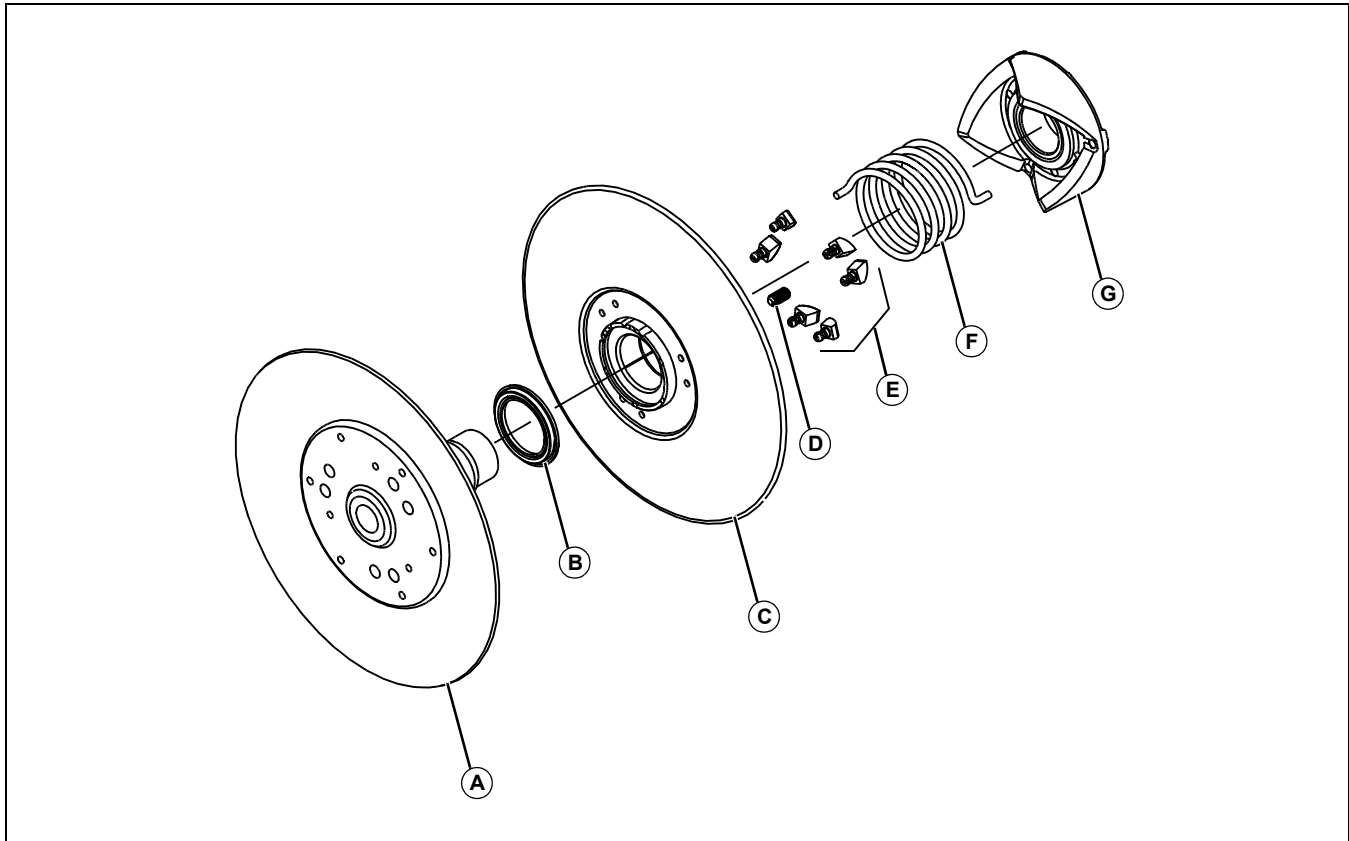
2. Parts in Pivot Bolt Kit

POWER TRAIN COMPONENT LOCATION

- H - Lock Nut²
- I - Bushing
- J - C-Clip
- K - Washer
- L - Bushing (4 used)
- M - Washer (8 used)
- N - Pin (2 used)
- O - O-Ring (4 used)

- P - Cap (4 used)
- Q - Pin, Drilled (2 used)
- R - Spring Pin (2 used)
- S - Clutch Spider
- T - Spring
- U - Clutch Cover
- V - Bolt (4 used)

Driven Clutch



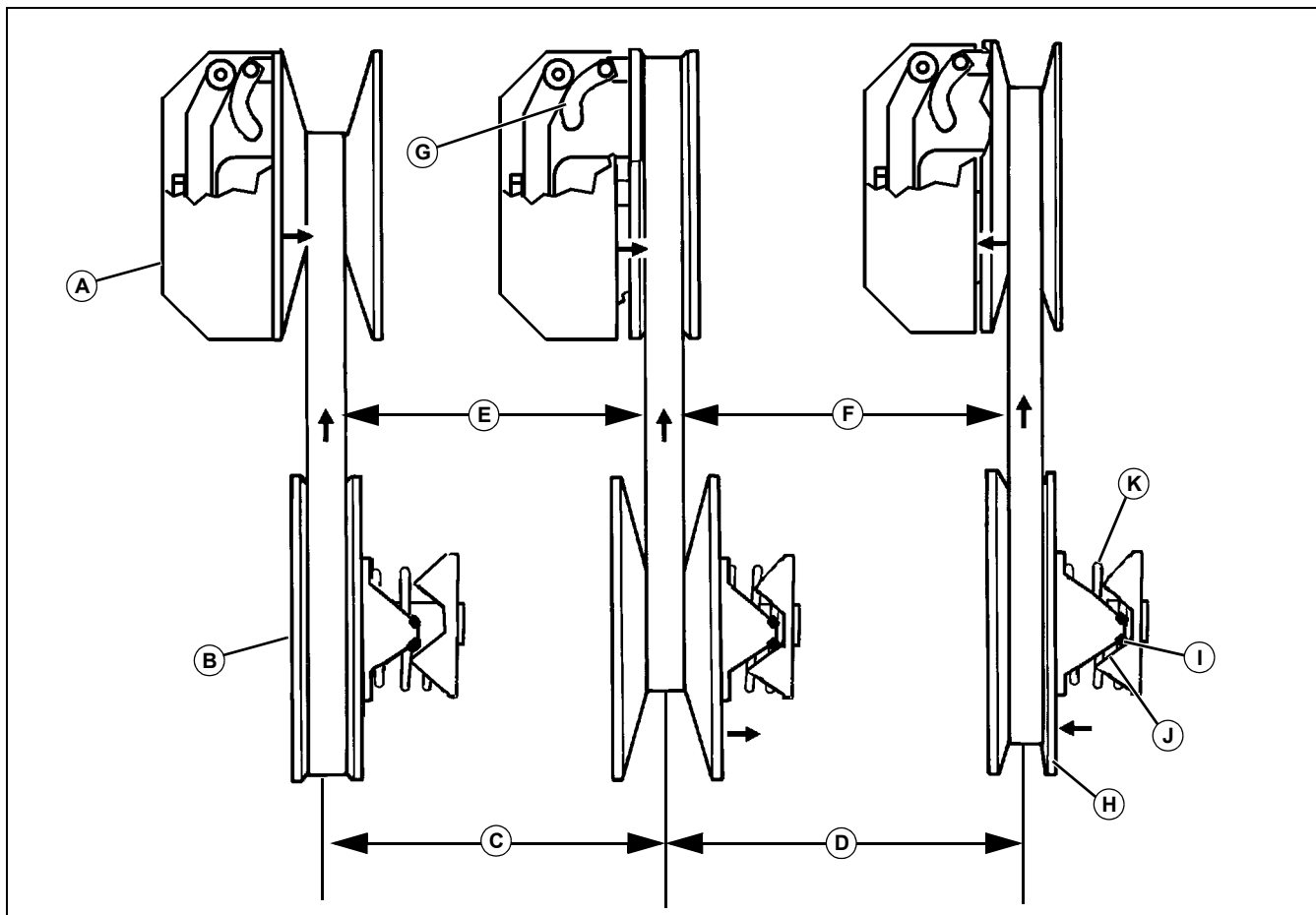
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- A - Clutch Plate, Stationary
- B - Wiper Seal
- C - Clutch Plate, Moveable
- D - Set Screw
- E - Wear Buttons (6 used)
- F - Spring
- G - Clutch Ramp

POWER TRAIN THEORY OF OPERATION

Theory of Operation

Clutch Operation



MX30398

Theory of Operation:

The variable clutch system is speed and load sensitive. The drive (A) and driven (B) clutches work together, automatically up-shifting (C) and back-shifting (D). This shifting changes the ratio between the clutches, allowing the engine to operate at optimum efficiency, at the peak of its power curve.

The drive clutch is engine speed sensitive, and is mounted on the engine crankshaft. It operates on the principle of centrifugal force. The driven clutch, mounted on the transaxle input shaft, is load sensitive to the rear drive wheels.

Engagement RPM, Minimum Load, Low Output Speed (E):

Drive clutch sheaves are moving closer together, just starting to move drive belt. Drive belt is running at the top of driven clutch. A high ratio between the clutches exist, similar to a low gear, as long as there is a minimum load.

High Engine RPM, Light Load, High Output Speed (F):

As engine speed increases, centrifugal forces of the flyweights (G) force the drive clutch to up-shift, moving the drive belt to outer pulley diameter, overcoming driven clutch spring. Drive belt then is pulled deep in driven clutch giving a low ratio, similar to a high gear.

High Engine RPM, Increasing Load, Lower Output Speed:

Back-shifting occurs as a load is encountered, such as a hill or soft terrain. The stationary side of the driven clutch resists forward movement of the wheels, at the same time, torque from the drive belt moves the moveable sheave (H) up the ramp. The ramp buttons (I), ramp (J), and spring (K) force the belt to the outside diameter of the driven clutch, and overcomes centrifugal forces of the drive clutch causing the back-shifting.

POWER TRAIN DIAGNOSTICS

Diagnostics

Diagnostic Check Points

Test Conditions:

- Engine off
- Rear wheels supported off floor
- Air pressure equal in driving tires. Driving tires close to same radius.

System: Drive Train

(1) Drive belt is in good condition?

Yes - Go to next step.

No - Replace drive belt.

(2) Shift linkage shifts in to forward, neutral and reverse and stays in gear during operation?

Yes - Go to next step.

No - Adjust shift linkage. See "Transaxle Shift Adjustment" on page 294.

(3) Axles rotate smoothly and quietly; no free play in axles, bearings or housings?

Yes - Go to next step.

No - Check axles and housings.

(4) Brakes not dragging?

Yes - Go to next step.

No - Adjust brakes. See "Brake Adjustment" on page 348 in the Brakes section.

(5) Differential lock engages and disengages

Yes - Go to next step.

No - Adjust differential lock. See "Differential Lock Cable Adjustment" on page 294.

(6) Differential lock produces no ratcheting sound in transaxle?

Yes - Go to next step.

No - Check internal components.

Test Conditions:

- Engine running at operating temperature and brakes set
- Transmission in neutral position
- Ensure engine is at correct slow idle speed. See appropriate engine specifications.

System: Engine Primary Clutch

(1) Primary clutch disengaged (drive belt not moving)?

Yes - Go to next check.

No - Repair or replace primary clutch.

Test Conditions:

- Engine running at operating temperature and brakes set
- Transmission in neutral position
- Accelerate engine

System: Engine Primary Clutch

(1) Primary clutch engages drive belt at 1350 - 1600 rpm?

Yes - Go to next check.

No - Replace drive belt. Repair or replace primary clutch.

Test Conditions:

- Engine running at operating temperature and brakes set
- Transmission in neutral position
- Ensure engine is at correct fast idle speed. See appropriate engine specifications.

System: Primary and Secondary Clutch

(1) Primary clutch sheave (movable clutch sheave) moves toward stationary sheave?

Yes - Go to next step.

No - Repair or replace primary clutch.

(2) Secondary clutch sheaves separate?

Yes - Go to next step.

No - Repair or replace secondary clutch.

(3) Secondary clutch fully up-shifted, primary clutch sheaves completely close?

Yes - Checks complete.

No - Repair or replace drive and/or secondary clutches.

POWER TRAIN TESTS AND ADJUSTMENTS

Tests and Adjustments

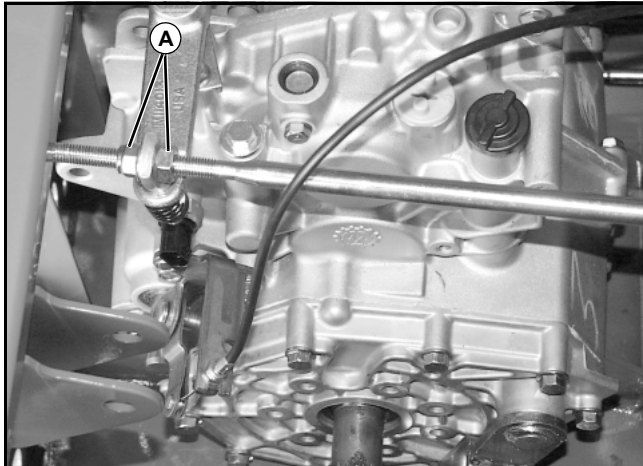
Transaxle Shift Adjustment

Reason:

- To insure gear shift lever is centered in neutral when transaxle is in neutral.
- To insure both forward and reverse gears will be completely engaged.
- To help prevent shifter from disengaging from gear during operation.

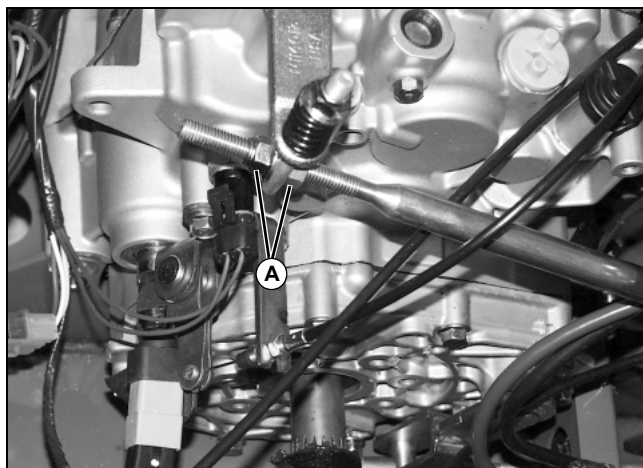
Procedure:

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.
3. Move shift lever until detent inside transaxle clicks firmly into the center neutral position.



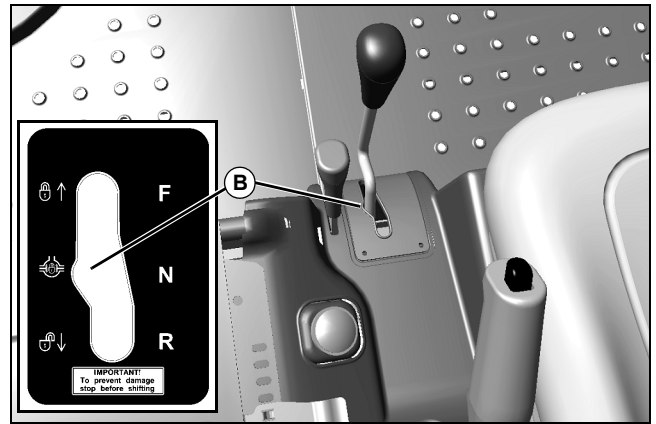
MX33777

Picture Note: TS Gator Shown



MX33778

Picture Note: TH Gator Shown



M151644, MX32938

4. Loosen shift rod nuts (A) as necessary. Adjust the shift rod nuts so the shift lever is centered in the shifter quadrant in the neutral position (B).
5. Tighten the shift rod nuts.
6. Shift into neutral and check neutral start.

Differential Lock Cable Adjustment

Reason:

To insure complete disengagement and engagement of differential lock.

Procedure:

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.
3. Chock the left side wheels.
4. Unlock the park brake.
5. Place the differential lock lever in DISENGAGED position.
6. Safely jack-up and support the right rear side wheel(s) just enough to allow the wheel(s) to rotate while the left side wheels remain firmly on the ground.
7. By hand, rotate right side drive wheel(s). Wheel should rotate freely with no clicking sound in transaxle. Differential should be disengaged.

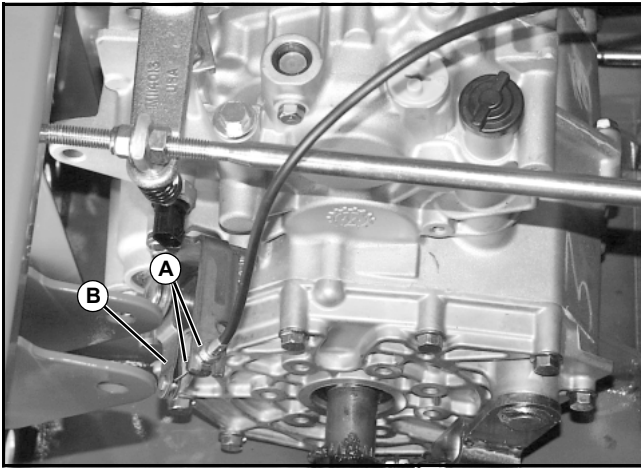
Thank you very much for your reading. Please Click Here. Then Get COMPLETE MANUAL. NO WAITING



NOTE:

If there is no response to click on the link above, please download the PDF document first and then click on it.

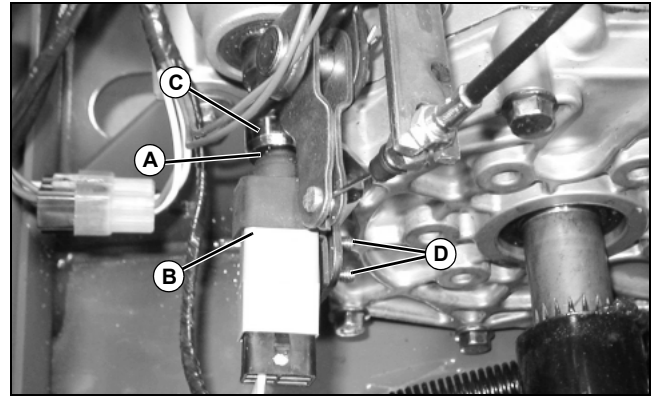
POWER TRAIN TESTS AND ADJUSTMENTS



TS Gator Shown



TH Gator Shown



MX34188

4. Measure the gap (A) between the differential lock switch (B) and the differential lock shaft (C).
5. If the gap is not to specification, loosen the mounting screws (D) and move the switch to obtain the proper gap.
6. Hold the switch in position and tighten the screws (D) to specification.

Specification:

Gap 1.0 mm (0.039 in.)
Differential Lock Switch Screws 7 N•m (62 lb-in.)

Drive Train Performance Tests

Engagement and Full Up-Shift Check



CAUTION: Avoid Injury! When operating machine to observe drive train performance, always operate in an area flat and free of obstacles. Use a passenger to observe power train so you can concentrate on driving safely. Never back machine with cargo box raised.

Reason:

To determine if the engine and drive train are operating at peak performance.

Conditions:

- Engine slow idle and fast idle speed set correctly
- Drive belt width at or above minimum specification
- Engine warmed up

Procedure:

1. Transaxle in neutral and park brake set. Start engine.
2. Slowly increase engine rpm. Observe engine rpm when clutch starts to engage and move drive belt.

8. Loosen the differential lock cable adjusting nuts (A), and adjust so that all slack in the cable is removed without pulling on the differential lock arm (B).
9. Tighten differential lock cable adjusting nuts (A).

Differential Lock Switch Adjustment - TH

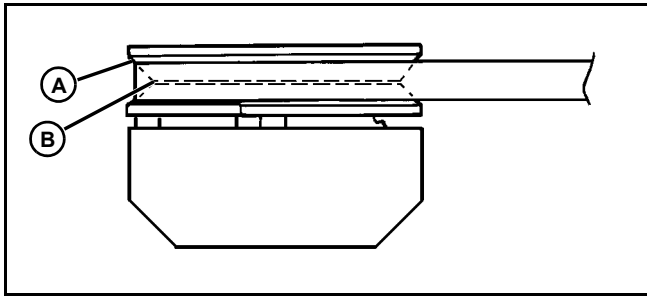
Reason:

To provide the proper clearance between the differential lock switch and the differential lock shaft to illuminate the differential lock light at the proper time.

Procedure:

1. Park the vehicle safely. (See Parking Safely in the SAFETY section.)
2. Raise and secure cargo box.
3. Place the differential lock lever in DISENGAGED position and insure the differential shaft is fully disengaged.

POWER TRAIN TESTS AND ADJUSTMENTS



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3. Accelerate from idle to wide-open-throttle and back to idle several times. Watch drive belt for a smooth transition from bottom to top of primary clutch (A). Watch closely for any hesitation or engine surging. Observe gap between primary clutch movable sheave and stationary sheave. Gap should completely close (B).
4. When approaching idle, watch for a positive disengagement from drive belt.

NOTE: On clutches with some hours of use, system may not disengage as smoothly due to primary clutch spring taking a set and other wear in the drive components.

5. Shut off engine.

Result:

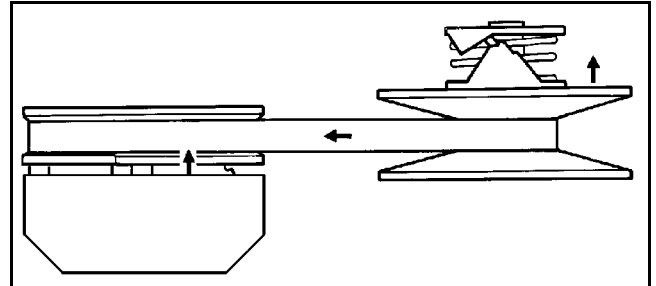
- With transaxle in gear, clutch should slowly start to engage and move machine between 1350 - 1600 rpm. Drive belt should be riding high in primary clutch and low in secondary clutch.
- If clutch has harsh engagement, erratic transition, hesitation, or clutch noise (chirping); perform primary clutch lubrication. Check primary clutch for cam weights binding, pivot pins worn, flat spots on rollers or rollers sticking, and no groove in sheave. Repair or replace primary clutch.
- If engine is surging; check engine and governor performance.
- Smooth engagement and transition (up-shift), primary clutch is good. Go To Driven Clutch Back-Shifting Check on page 296.

Driven Clutch Back-Shifting Check

Reason:

To determine condition of driven clutch and back-shifting performance.

Conditions:



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- Cargo box raised
- Indoor testing - rear wheels off ground and machine supported safely on jack-stands.
- Front wheels chocked
- Differential lock engaged
- Tachometer displaying engine speed

Procedure:



CAUTION: Avoid Injury! Rear wheels will rotate during test. Keep clear!

1. Start engine.
2. Put transaxle in gear.
3. Operate engine at wide open throttle.

Results:

- Engine and wheel speed should remain constant. Drive belt should be riding high in drive clutch and low in driven clutch.

Procedure:

1. Momentarily load power train by slowly applying brake or park brake until back-shift is made.
2. Quickly observe engine speed, then release brake.

Results:

- Clutches should back-shift as load is increased.
- Drive belt should not squeal or slip.
- Check secondary clutch for complete up-shift. Check for load on drive train, such as an engaged brake or failed axle bearings. See "Brake Adjustment" on page 348 in the Brakes section.